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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,012	07/17/2003	Walter Aupperle	MB 375	1652
7590 11/08/2004			EXAMINER	
KLAUS J. BACH & ASSOCIATES PATENTS AND TRADEMARKS 4407 TWIN OAKS DRIVE MURRYSVILLE, PA 15668			WOLFE JR, WILLIS RAY	
			ART UNIT	PAPER NUMBER
			3747	

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,012

Applicant(s)

AUPPERLE ET AL.

Examiner

Willis R. Wolfe, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Laughlin. Note EGR passage (18,34,36) between the exhaust system (16,17) and intake manifold (32) having a first exhaust high pressure gas cooler (21), EGR valve (19), and second heat exchanger (5) containing a vaporizing liquid (10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Laughlin in view of Bauerle et al. O'Laughlin discloses the claimed invention except for the particular EGR valve with an inlet and an outlet on a common lateral surface. Bauerle et al teaches that it is known to provide an EGR valve (38) with an inlet (42) and an outlet (43) on a common lateral surface as shown in Figure 2. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the EGR valve of O'Laughlin by providing the EGR valve with an inlet and an outlet on a common lateral surface as taught by Bauerle et al since applicant has not disclosed that the particular inlet and outlet of the EGR valve solves any stated problem or is for any particular purpose and it appears that the invention of O'Laughlin would perform equally well with such an arrangement.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Laughlin in view of Israel et al. O'Laughlin discloses the claimed invention except for the charge-air cooler and the exhaust gas cooler having the same cooling circuit. Israel

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et al teaches that it is known to provide a charge-air cooler (52) and an exhaust gas cooler (44) having the same source of cooling air as shown in Figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first engine of O'Laughlin by providing a charge-air cooler and having it share the same cooling air as the first EGR cooler as taught by Israel et al in order to provide a cooled air intake mixture of exhaust gas and air to the engine.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Laughlin in view of Wall et al. O'Laughlin discloses the claimed invention except for providing a charge-air cooler for the intake airflow. Wall et al teaches that it is known to provide a charge-air cooler (20) and an exhaust gas cooler (36) and exhaust gas cooler (38) having different cooling circuits as shown in Figure 2. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first engine of O'Laughlin by providing a charge-air cooler and having the charge-air cooler with a different cooling circuit from the EGR coolers as taught by Wall et al in order to provide a cooled air intake mixture of exhaust gas and air to the engine.

Response to Arguments

Applicant's arguments filed October 14, 2004 have been fully considered but they are not persuasive. The argument that the container (5) of O'Laughlin is not a heat exchanger is incorrect. The container contains a liquid to be vaporized by the heat of

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the EGR. Releasing its heat to this liquid inherently cools the recirculated exhaust gas and therefore the container acts as a heat exchanger that cools the exhaust gas. The first heat exchanger of O'Laughlin is inherently a high-pressure heat exchanger since it is directly connected to the exhaust gas system and is subjected to the full pressure of the exhaust gas. The second heat exchanger (vaporizing container) is downstream of the EGR valve and the first EGR cooler and is therefore not subjected to full exhaust gas pressure.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

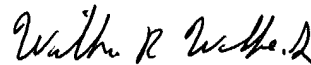
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willis R. Wolfe, Jr. whose telephone number is (703) 308-1950. The examiner can normally be reached on Tuesday, Wednesday and Friday (4:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry C. Yuen can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Willis R. Wolfe, Jr.
Primary Examiner
Art Unit 3747

WRW
November 3, 2004